

Further Notes on *Erebia* in the French Massif Central

By GEOFFREY N. BURTON, B.A.*

I sent off 60p for a specimen copy of *The Entomologist's Record* in November 1976 and received the October edition. I am sure that I would have sent a subscription anyway, but this copy ensured a swift response on my part, as it contained the first part of M. J. Perceval's article on *Erebia* in the Massif Central. This is an area in which I have spent most of my holidays in the last six years and which has really been responsible for my interest in Lepidoptera, which grew out of my efforts to photograph the butterflies I saw and then identify them. My active collecting is now four years old and the large majority of my material comes from this area. In view of the relative paucity of records, a full report of my observations may well be of interest, but at present it is my intention only to add my own comments on *Erebia* to those of M. J. Perceval.

It should be made clear that the area of which I have experience is, by and large, restricted to Cantal, especially around Murat, and including Le Lioran and Puy Mary. I have not visited the Mont Dore area and have not collected around the Gorge du Tarn.

Erebia ligea Linn.

This species has been present on Plomb du Cantal—East and West sides—and in quite large numbers in the forest above Chambeuil (between Murat and Laveissière) from 1,000 to 1,385 m. Specimens have been fresh in the first week in August. Average size 25.5 mm. I have encountered none elsewhere, especially not at Puy Mary.

Erebia euryale Esp.

Found in fresh condition in the first week in August at Puy Mary and above Chambeuil. The upperside markings are fairly consistent, with a well-defined band on the front wings and well-separated but bright spots on the hindwings. The underside is typical of ssp. '*antevortes*', with almost complete absence of silver bands. Hindwing spots are often reduced. Average size 22 mm.

Erebia manto D. & S.

My series taken at Puy Mary and above Chambeuil in 1975 and 1976 (July-August), indicate an even more variable situation than that described by M. J. Perceval. The male uppersides are almost all entirely unmarked, as would be expected for ssp. '*constans*', but I have several specimens with unmistakable red apical flush, similar to ssp. '*pyrrhula*', although the hindwing markings are still completely absent. The undersides are even more variable and range from completely unmarked—which are really quite rare—to those with a quite extensive forewing flush and hindwing spots (blind). The normal apical spots are not clearly defined and merge

* "Mar-y-Mar", Minster Drive, Minster-in-Sheppey, Kent, ME12 2NG.

with the flush. I have only one specimen with eyed apical spots.

The females all have upf. red markings (blind), and the unf. have a clearly defined post-discal band with a pale area extending basad. The unh. have a reddish flush and clearly defined yellow spots in S5 and S7 and sometimes, smaller yellow marks in S4, S6 and S8 (or some of these—S8 is commonest). The markings are not as yellow as in '*manto manto*', nor as extensive, and there is no trace of the basal marks.

The males ranged between 19.0 mm. and 21.4 mm. and average 20.1 mm. The females average 21.1 mm. This is at variance with Mr. Perceval's findings and must surely support the view that some doubt remains about the status of f. '*gnathene*'.

Erebia epiphron Knoch

While I have taken this at Puy Mary, Plomb du Cantal and Chambeuil, I have not found it common in August and can add nothing to Mr. Perceval's detailed notes.

Erebia sudetica Stg.

I have found this common at Puy Mary and on the East side of Plomb du Cantal, but it does not seem to be present slightly further East at Chambeuil, nor have I taken it at its type location of Le Lioran, and the development of a ski resort here may well have destroyed it. Specimens taken at both locations in July-August 1975 were very fresh and at Puy Mary, it was the commonest butterfly, present in vast numbers, flying together with a much smaller number of *Erebia epiphron*, but in 1976 it was absent from Plomb du Cantal and scarce and worn at Puy Mary, due no doubt to the effects of the hot summer.

From my series, the upf. band usually extends from S1b-S6 and often contains no black points at all. Points are most common in S4 and S5 and are extremely rare in S6. The uph. usually have four regular red spots, with or without points. The average size of the males is 16.2 mm. and of the females 17.4 mm.

I would like to suggest, with some hesitation, that the specific status of '*lioranus*' remains open to doubt. One of the features which distinguish '*sudetica*' from '*melampus*', the point in upf. S6, is extremely rare in my series of '*lioranus*', although the regularity of the uph. series of spots is constant. Warren (1961) states that in '*sudetica*', "all the spines (on the valves) are distinctly separated", whereas in '*melampus*', ". . . the fine spines are mostly touching", and that, "all the spines in '*sudetica*' of whatever size, are of heavier build". In '*lioranus*', there appears to be quite a lot of variation and my slide preparations do not clearly or consistently exhibit these features. Higgins (1975) differentiates '*melampus*' and '*sudetica*' on the grounds of tooth size and, ". . . valve (of '*sudetica*') even more slender with gentle curve". Again, my slides are not consistent, but seem to exhibit more often the shape of '*melampus*'.

I draw no conclusions and make no claims at present, as I wish to pursue the question much further. I hope to follow up these points at a later date, but in the meantime, I would be grateful for any comments.

Erebia aethiops Esp.

I have taken this species above Chambeuil in both 1975 and 1976. It was present in reasonable, but not large, numbers, in fresh condition from 1,100-1,300 m. This extends its range further South from Mr. Perceval's specimens taken near Condat and seems to indicate that, though local, it is a quite well-established species.

I cannot comment on its subspecific status, but my series agrees with Mr. Perceval's. The undersides are of both the silver and gold types, and the average male size is 23.3 mm. and female 23.8 mm.

Erebia meolans de Prun.

This butterfly has been present fairly commonly at Puy Mary and above Chambeuil in 1975 and 1976, though females have been quite rare.

The upf. bands are very variable, usually extending from S1b or S2 to S6, with white-pupilled ocelli in S4 and S5, and often a smaller one in S2. No specimens have additional ocelli and several have a much reduced one in S2; in some it is absent. Again, in some the post-discal band is much reduced. The unh. are much more faintly marked and the spots (with or without ocelli) are usually widely separated by brown.

All the above features seem to me to be well within the normal range of variation. The undersides, however, seem much more unusual. In none is the unf. very dark, and they have an overall reddish (russet) tinge, darkening towards the base. The post-discal band and ocelli largely match the upf. markings, although they are perhaps slightly wider. The unh. are even paler brown and have a distinct silvery post-discal band extending from S1b to S8. Sub-marginally and discally they are again darker, while the base is sometimes again paler. Ocelli are usually completely absent, although in one or two a minute point can be detected in S2.

The sizes range from 21.1 mm. to 22.8 mm. and the average is 22.0 mm.

This description may appear to be inconsistent with the female of ssp. '*meolans*', but the overall ground colour is much darker, and they are males. The overall patterning of the unh. is very close to that of *E. aethiops*, although there is no similarity of ground colour.

I have prepared genitalia slides, as I thought perhaps I was missing something obvious and making a simple error in identification, but they are clearly *E. meolans*, although the valves exhibit some differences from the type shown by L. G. Higgins (*op. cit.*).

What all this may mean, I do not know and at present I do not have sufficient comparative information to allow

me to draw conclusions, but is it possible that we have here a ssp. intermediate between 'meolans' and 'stygne'?

Postscript

It will be seen that, in the preceding notes, I have only referred to the years 1975 and 1976. My observations and records extend further back than this, but I have not used them as I do not consider them sufficiently accurate. Similarly, I have only referred to three or four locations, because my information from these is quite full, but is much reduced from other sites.

The summer of 1976 had, apparently, the same effects in France as in England. Everything was much earlier and *Erebia*, especially, were much scarcer than usual in August, presumably because they were mostly over.

References

- Bretherton, R. F. 1966a. A Distribution List of the Butterflies (Rhopalocera) of Western and Southern Europe. *Trans. Soc. Br. Ent.*, 17, pt. 1.
- Bretherton, R. F. 1966b. Butterflies in the French Massif Central, July 1966. *Ent. Rec.*, 78: 245-251.
- Higgins, L. G. 1975. *The Classification of European Butterflies*, Collins.
- Higgins, L. G. and Riley, N. D. 1970. *A Field Guide to the Butterflies of Britain and Europe*. Collins.
- Perceval, M. J. 1976. Notes on the *Erebia* of the French Massif Central. *Ent. Rec.*, 88: 241-245, 324-329.
- Warren, B. C. S. 1961. Structural Characteristics of *E. sudetica* and *E. melampus*. *Ent. Rec.*, 73: 188-189.

AGROTIS IPSILON HUFNAGEL IN MARCH. — On the night of the 26th March, 1977, I recorded here in my light trap a female example of the Dark Swordgrass, which I presumed was an immigrant. — A. E. C. ADAMS, Perrins Farm, Woods Green, Wadhurst, East Sussex, TN5 6QN.

LONGITARSUS REICHEI ALLARD (COL. CHRYSOMELIDAE) IN WEST SUSSEX ON YET ANOTHER PROBABLE FOODPLANT. — In a note on this little-known *Longitarsus* (1967, *Ent. mon. Mag.*, 103: 154-5), I drew attention to the curious fact that all my four captures of it had been from different host-plants (one Composite, three Labiates) — though one of the latter was not certainly traced. I can now add a further Labiate to the list of its apparent foodplants, having taken a single female by sweeping along a marsh dike at Amberley, West Sussex (13.viii.70), where the marsh woundwort, *Stachys palustris* L., grew profusely. As no other plant at all likely to be a host of *L. reichei* appeared to be present, the probability of the beetle having come off the *Stachys* is very high. I had already taken the species in East Sussex (*l.c.*: 154), but the present record should be a new one for the western vice-county. — A. A. ALLEN, 49 Montcalm Road, Charlton, London, SE7 8QG.